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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/804,381	03/13/2001	Sin-Gu Kang	06192.0194.NPUS00	1173

7590 11/20/2002  
McGuire Woods LLP  
1750 Tysons Boulevard  
Suite 1800  
McLean, VA 22102

EXAMINER

ZAMANI, ALI A

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/804,381

Applicant(s)

KANG, SIN-GU

Examiner

Ali A. Zamani

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (US Pat. No. 6,411,359).

In regard to claims 1-19, Kobayashi et al. teach a driving signal to a display cell circuit having a plurality of signal transmission lines and formed on a transparent substrate (see Figs. 7 and 25) through the plurality of signal transmission lines, comprising: a flexible board (FPC1, FPC2); a driving circuit mounted on the flexible board (Fig. 7); a plurality of driving signal input/output lines that are electrically communicated with the driving circuit and the display cell circuit so as to input/output the driving signal (see Fig. 39); and an inspecting (see Fig. 23, cols 14 and 15) formed on the plurality of driving signal input/output lines for inspecting states of the plurality of driving signal input/output lines and the driving signal. Kobayashi et al. also teach a LCD element formed by sandwiching a liquid crystal layer with a first substrate having active elements formed thereon and a second substrate having a common electrode formed short sides of said liquid crystal display element, a flexible board connected to said interface circuit board at one end thereof and provided at least along one long side of said first substrate of supplying a driving signal voltage for display to said active elements and a driving IC chip mounted such that it is connected to extraction lines of said active elements at output terminals thereof and to a

conductor layer portion of said flexible board at input terminal thereof and said one driving IC chip per (1) is mounted on said flexible board in the position furthest from said interface circuit board (col. 5, lines 1-39). Furthermore, the above driving circuit is a gate driving circuit (206), and the driving signal is a gate-driving signal that is applied from the gate driving circuit to a gate of the display cell circuit through the signal transmission lines (see Figs 39 and 40).

Kobayashi et al. further teach a block diagram showing a schematic configuration of each of drivers (drain drivers, gate drivers and common drivers) of the liquid crystal display element and the flow of signals and a display controller (201) (Fig. 35), a drain driver (211) is provided in the drain driver portion (103) and a gate driver (206) is provided in the gate driver portion (104), the display controller (201) receives control signals from the main computer (a clock signal, a display timing signal, and a SYNC signal), generates a clock (CL1 and CL2) and display data as control signals to the drain driver (103) and simultaneously generates a frame start indication signal FLM, a clock (CL3) and display data as control signals to the gate driver (104). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention by solving and improving the arrangement of extraction lines of drain wiring, a driving IC for the same and a drain-side flexible board in order to provide a liquid crystal display device in which the dimensions of the frame area can be reduced.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Zamani whose telephone number is (703) 308-6414. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 5:00 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe, can be reached on (703) 305-4709.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, DC 20231

**or faxed to:**


**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Ali Zamani

Nov. 15, 2002

  
RICHARD HJERPE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600